



**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of: )  
GORTY ET AL. )  
Serial No. 10/767,571 ) Examiner: J. Hu  
Filing Date: January 29, 2004 )  
Confirmation No. 6197 ) Art Unit: 2154  
For: SYSTEM AND METHOD OF POLLING )  
ELECTRONIC MAILBOXES )  
\_\_\_\_\_ )

**SUPPLEMENTAL DECLARATION UNDER 37 C.F.R. 1.131**

Mail Stop Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

We, Suryanarayana Murthy GORTY and Shaibal ROY,  
do hereby declare and state:

1. We are the co-inventors of claims 1-33 as  
originally filed in the above-identified patent  
application.

2. Applicants have reviewed the Office Action  
dated September 9, 2005 in which the Examiner stated the  
original 131 Declaration was insufficient because greater  
details concerning the reduction to practice should be  
submitted and clarification as to dates submitted. This  
Supplemental Declaration is submitted in response to that  
Office Action. For purposes of clarity, Exhibit 1 has now  
been resubmitted with all dates included. Applicants also

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submit Exhibits 2, 3 and 4 that show details regarding the timeline achieved when drafting code and the timeframe regarding reduction to practice that occurred prior to August 7, 2003, the effective date of U.S. patent application publication no. 2005/0039048 to Tosey.

3. We conceived and reduced to practice the subject matter of the above-identified patent application while working in our offices in the United States at TeamOn Systems, Inc., 1180 NW Maple Street, Issaquah, Washington 98027, prior to August 7, 2003, the effective date of U.S. patent application publication no. 2005/0039048 to Tosey.

4. We conceived of a communications system and method of polling electronic mailboxes in which a polling agent polls an electronic mailbox to retrieve unique identifiers (UID's) of electronic messages. A database stores the UID's resulting from the polling. The polling agent is operative for polling the electronic mailbox and retrieving only those UID's that are newer than the UID's from a previous polling to determine that new messages are available. Claim 1 recites this function and structure.

5. We worked diligently and, as shown in Exhibit 1, had drafted details of a functional specification before August 7, 2003. The functional specification shown in Exhibit 1 indicates the type of details and software engine that will make polling efficient to retrieve UID's from a source, such as in reverse chronological order. Technical details of the optimization for the system and method are also set forth. This functional specification indicates that we had worked

out many of the details of the claimed invention to determine the best operating manner. In a few weeks after this functional specification was completed, we reduced to practice and implemented software for operation and testing.

6. Page 2 of Exhibit 1 explains various details. The efficient implementation of the system and method includes "new-mail-only" polls in which the engine for polling and aggregation, i.e., the "AggEngine" retrieves UID's from a source in small batches in reverse chronological order until it sees a UID that already exists in the database. This engine includes a function "AggCron" that can make the choice between "new-mail-only" and "regular" polls. There is a use of a POP proxy that could be used with some deletions at the source. Some optimization could keep the UID's in the database longer after the messages have been deleted at the source. This functional specification discusses OWA and iNotes protocols, which are web-based mail applications from Microsoft and IBM, respectively, indicating that web pages can be retrieved page-by-page to determine a new message list.

7. The bottom portion of page 2 and pages 3, 4 and 5 of Exhibit 1 includes data regarding the UID targets and optimization that supports the functional specification.

8. Exhibits 2, 3 and 4 are snapshots of code archives that explain that software coding was accomplished in March 2003. These exhibits contain project tracking and

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source-code control. Exhibit 2 shows the times of code check-ins of a file that had been modified. Revision 1.130 indicated by the arrow at the side on sheet 1 of Exhibit 2 shows that certain attributes and a poll type had been added to the software code. The comment mentions poll type=new that marks the differentiation between "new-mail-only" and "regular" polls as outlined in paragraph 6 above. Sheets 2 and 3 are enlarged portions of the first sheet. The snapshots date from before August 7, 2003, but these copies had been printed at November 12, 2005 at our attorney's offices indicated in the printout for purposes of this Supplemental 131 Declaration.

9. Exhibit 3 shows that the project was tracked and that the release was scheduled for April 2003 and testing done on April 11 as shown in ID609 at the bottom of sheet 2 and the bottom of the full page printout on sheet 1. Exhibit 4 is a continuation of Exhibit 3, but the screen shot did not completely capture the entry, but shows that the last changes for tracking this project were done on April 29, 2003. Actual coding and testing had been done by that time. Testing had been done by April 11, 2003. Thus, it is clear that the subject matter of at least claim 1 and other dependent claims had been reduced to practice in code and tested prior to August 7, 2003. We had been working consistently with reducing bandwidth requirements even before August 7, 2003.

10. After we had reduced to practice the claimed invention before August 7, 2003, we worked diligently to

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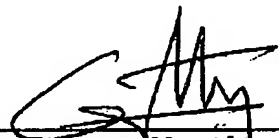
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improve the function in the reduced to practice software and made some code modifications.

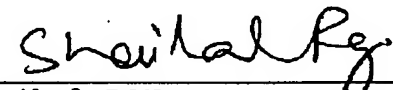
11. After working with our patent attorneys, we filed a patent application on the system and method as claimed on January 29, 2004.

12. We hereby declare that all statements made herein are of my own knowledge and are true and all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title XVIII of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

12/5/2005  
Date

  
Suryanarayana Murthy GORTY

12/5/2005  
Date

  
Shaibal ROY

# TeamOn Feature Summary

**Title:** Polling Optimization

**File:** Arch\_Polling Optimization.doc

**Date:** February 18, 2003

**Author:** Jon Smith

|   |   |
|---|---|
| Revision history: .....                 | 1 |
| Open issues, questions & comments ..... | 1 |
| Overview: .....                         | 1 |
| Goals: .....                            | 1 |
| Current process: .....                  | 1 |
| Assumptions: .....                      | 1 |
| Scope: .....                            | 1 |
| Details: .....                          | 2 |

## Revision history:

February 18, 2003 – Jon – Shaibal's original e-mail defining the feature

## Open issues, questions & comments:

## Overview:

{Provide a one-page paragraph of the feature}

## Goals:

[Define the goals of the project and specific objectives within each of the goals.]

## Current process:

[Describe the current process, if any.]

## Assumptions:

List assumptions made.

## Scope:

[Define the scope of the feature, what will and will not be included.]

## Details:

[Provide the details of the feature including implications to UI, security, documentation, training, existing processes, existing partners, etc.]

"Polling optimization"

The objectives will include:

- Reduce our Exodus bill (and that of others using MOP)
- Reduce workload on POP mail providers
- Reduce workload on OWA 5.5 servers
- Reduce workload on OWA 2k and iNotes servers

Note that the first two objectives may turn out to be the same, given the preponderance of POP3 among our current customers. The only question here is whether a large enough number of the POP mailboxes that we are polling contain a large number of messages. If so, optimization of the POP3 polls by itself should bring down our Exodus bills. If not, we may need to do POP, OWA 5.5 and OWA 2k to bring down the Exodus bills.

Technical details:

One way to make polling more efficient is to make the vast majority of polls "new-mail-only" polls. Such polls do not check to see whether any messages have been deleted from the source. Only a small minority of polls will check the entire source mailbox to see what has been deleted. An efficient implementation of "new-mail-only" polls will have AggEngine retrieve UIDs from the source in small batches in reverse chronological order (we may have to make some assumptions about the chronological order at the source) until it sees a UID that already exists in the database. AggCron will make the choice between "new-mail-only" and "regular" polls, choosing the former much more frequently than the latter.

More Technical details:

The "new-mail-only" polls don't work very well for our POP Proxy, which needs the list of UIDs in our database to reflect the deletions at the source. This optimization will keep the UIDs in our database longer after the messages have been deleted at the source. However, we can't just get away by making the polls triggered by POP logins to be "regular"-- those are precisely the polls that we need to be fast. Let me elaborate on this in my next email -- but let's not do anything special for POP Proxy in this FPL item.

-shaibal

Darren collected the following data to help us determine where polling needs optimization. Let me pull out a part of it as highlight:

QUERY (number of Uids stored for active source mailboxes, by protocol):  
protocolName

|        |        |
|--------|--------|
| domino | 30995  |
| imap   | 200    |
| native | 100594 |
| owa    | 162961 |
| pop    | 728465 |
| rpa    | 47     |

That tells me that the top four targets for optimization are:

- 1) pop

- 2) owa
- 3) native
- 4) domino

Now, owa is not split off into owa 5.5 and owa 2k. But I think this optimization is more important for 5.5 than for 2k. IF you buy that, the priority goes like this:

- 1) pop
- 2) owa 5.5
- 3) owa 2k
- 4) native (already covered by owa 2k?)
- 5) domino

BTW, there is an iNotes account with over 23,000 uids!

-shaibal

-----Original Message-----

From: D Gardner [mailto:dgardner@hq.teamon.com]  
 Sent: February 13, 2003 5:08 PM  
 To: Shaibal Roy  
 Subject: Uid numbers

Shaibal, here are the numbers from the T-Mobile system  
 \*\*\*\*\*

QUERY (number of active source mailboxes, by protocol):

```
-----
set transaction isolation level 0
go
select smb.protocolName
       ,count(*)
  from SrcMbox smb
 where smb.nextPoll <> 9999999999
 group by smb.protocolName
go
set transaction isolation level 1
go
```

RESULT:

```
-----
protocolName
-----
CS2000      449
domino      12
imap       1228
native      328
owa         431
pop        23509
rpa          4
(7 rows affected)
```

QUERY (number of Uids stored for active source mailboxes, by protocol):

```
-----
set transaction isolation level 0
```



```

go
select smb.protocolName
      ,count(*)
  from SrcMbox smb
      ,SrcMboxMsg smbmsg
 where smb.nextPoll <> 9999999999
       and smbmsg.srcMboxID = smb.srcMboxID
 group by smb.protocolName
go
set transaction isolation level 1
go

```

RESULT:

```

-----
protocolName
-----
domino          30995
imap            200
native          100594
owa             162961
pop             728465
rpa             47
(6 rows affected)

```

\*\*\*\*\*

THEREFORE, the average number of Uids per active source mailbox, by protocol, sorted ascending by AVERAGE:

| protocolName             | NumSrcMboxes | NumUids | AVERAGE |
|--------------------------|--------------|---------|---------|
| CS2000                   | 449          | 0       | 0       |
| imap                     | 1228         | 200     | 0.16    |
| sources                  |              |         |         |
| have Uids? See (1) below |              |         |         |
| rpa                      | 4            | 47      | 12      |
| pop                      | 23509        | 728465  | 31      |
| native                   | 328          | 100594  | 307     |
| owa                      | 431          | 162961  | 378     |
| domino                   | 12           | 30995   | 2583    |

(2) below

(1) It turns out that there are 6 IMAP source mailboxes with Uids:

| srcMboxID | NumUids |
|-----------|---------|
| 121901    | 2       |
| 99620     | 4       |
| 155490    | 11      |
| 158244    | 19      |
| 131557    | 21      |
| 122489    | 162     |

(6 rows affected)

I will look into these. Perhaps they converted a POP source into an IMAP

source(?)

(2) Since there are only 12 domino source mailboxes, I created a histogram, which point to one odd mailbox:

| srcMboxID | NumUids |  |
|-----------|---------|--|
| 88585     | 1       |  |
| 121236    | 1       |  |
| 128721    | 11      |  |
| 96063     | 13      |  |
| 153409    | 13      |  |
| 147878    | 139     |  |
| 62318     | 238     |  |
| 95250     | 311     |  |
| 88894     | 1436    |  |
| 143683    | 1694    |  |
| 91490     | 3936    |  |
| 156273    | 23205   | <-- This one looks pretty goofy. It is NOT a test account. It was created on 2/10/2003. (12 rows affected) |

I will try to break down the numbers a bit more. Let me know if you want me to run the OnCommand numbers as well.

Darren

```
CVS:  patch: trunk-2003033120-1750, trunk: 2003033120-1266, trunk: 2003033120-1231, trunk: 2003033120-1205, trunk: 2003033120-1148, trunk: 2003033119-1259, trunk: 2003033119-1122, trunk: 200303318-1500, trunk: 200303317-1554, trunk: 200303317-1500, trunk: 200303317-1315, trunk: 200303316-1500, trunk: 200303315-1500, trunk: 200303314-1621, trunk: 200303314-1500, apr03: 200303314-1018
Branch point for: apr03
Changes since 1.130: +6 -14 lines
Diff to previous 1.130
```

Revision 1.127.2.3 / (view) - [select for diff] - Fri Mar 14 22:31:01 2003 UTC (2 years, 7 months ago) by gms  
Branch: feb03

CVS Tag: fe603 BWC17-20030606-1054, fe603 BWC17-20030603-1710, fe603 BWC17-20030621-1149, fe603 BWC17-20030502-1443, fe603 BWC17-20030423-0915, fe603 BWC17-20030421-1718, fe603 BWC17-20030410-1928, fe603 BWC17-20030410-1512-20030410-1622, fe603 BWC17-20030410-1512-20030410-1541, fe603 BWC17-20030410-1512, fe603 BWC17-20030405-0916, fe603 BWC17-20030402-1723, fe603 BWC17-20030401-1621, fe603 BWC17-20030401-1729, fe603 BWC17-20030403-1711, fe603-20030331-1059, fe603-20030314-1505

Benchmark point for fe603 BWC17

Engr'd: 3792 Fix quick pull

```
CVS Tags: trunk-20030313-1809, trunk-20030313-1500, trunk-20030312-1735, trunk-20030312-1500, trunk-20030311-1500, trunk-20030310-1500, trunk-20030309-1500, trunk-20030308-1500
Changes since 1.129: +68 -34 lines
Diff to previous 1.129
```

309:72  
309:609

```
C/S tags: trunk-20030307-1500, trunk-20030307-1146, trunk-20030306-1556, trunk-20030305-1611, trunk-20030304-1555, trunk-20030304-1317, trunk-20030304-1105, trunk-20030304-1026, trunk-20030303-1620, trunk-20030302-1620, trunk-20030301-1619, trunk-20030228-1620, trunk-20030227-1620, trunk-20030226-1620, trunk-20030225-1621, trunk-20030224-1619, trunk-20030223-1619, trunk-20030222-1014, trunk-20030221-1754, trunk-20030221-1637, trunk-20030220-1620, trunk-20030220-0946, trunk-20030219-1620, trunk-20030218-1620, trunk-20030217-1619, trunk-20030216-1619, trunk-20030215-1620, trunk-20030214-1620, trunk-20030213-1620, trunk-20030212-1619, trunk-20030211-1623, trunk-20030210-1808, trunk-20030209-1619, trunk-20030208-1620, trunk-20030207-1620, trunk-20030206-1620, trunk-20030205-1622, trunk-20030204-1620, trunk-20030203-1619, trunk-20030202-1618, trunk-20030201-1619, trunk-20030131-1619

Changes since 1.128: +10 -1 lines
Diff to previous 1.128
```

Eh.6+2



11497\_QuickPollCheckIn1.JPG



| Assignments - Microsoft Internet Explorer  |    |                            |  |
|--|----|----------------------------|--|
| File Edit View Favorites Tools Help  |    |                            |  |
| Back Forward Stop Home Favorites Links TeamOn Tech-Java J2SEv1.5.0 DevTrack  |    |                            |  |
| Address http://project.seattle.rim.net/fpl/viewAll.asp?taskTypeId=0&targetReleaseId=0&teamMemberId=0&isTeamMember=true&submit=Su |    |                            |  |
| Google Search 779 blocked Check AutoLink   |    |                            |  |
|  |    |                            |  |
| 455  | 10 | Alert filters              | Provide the ability for a user to set criteria so that e-mail delivered to a mailbox triggers an alert to their device.  |
| 590  | 10 | Apr03 Provisioning changes | This feature includes changes to the provisioning flow and text to increase user success. It also may include control that can access Outlook in Corporate mode.   |
| 608  | 10 | Replace SMTP for alerting  | <ul style="list-style-type: none"> <li>This is closely related to the WAP push FPL item and should be assigned to the same developer(s).</li> <li>Leading candidates to replace SMTP are               <ul style="list-style-type: none"> <li>SMPP 3.4</li> <li>PAP(Push Access Protocol)</li> </ul> </li> </ul>   |
| 609  | 13 | Polling Optimization       | <p>Objectives include:</p> <ul style="list-style-type: none"> <li>Reduce our bandwidth usage, and thus our Exodus bill.</li> <li>Reduce workload on POP mail providers</li> <li>Reduce workload on OWA 5.5 mail providers</li> <li>Reduce workload on OWA 2K and iNotes mail providers               <ul style="list-style-type: none"> <li>One option is to make the majority of polls "new mail only" polls. These polls would not check for messages, only "new mail".</li> </ul> </li> </ul> |

11497\_QuickPoll\_FPL11.JPG





| Assignments - Microsoft Internet Explorer   |  |    |
|---|--|----|
| File Edit View Favorites Tools Help<br>Back Forward Stop Home Favorites Links TeamOn TechJava J2SEV1.5.0 DevTrac<br>Address http://project.seattle.rim.net/fpl/viewAll.asp?taskTypeId=0&targetReleaseId=0&teamMemberId=0&isTeamMember=true&submit=S<br>Google Search 779 blocked Check Autolink   |  |    |
|   | Design:<br>See description.<br><input type="checkbox"/> Review required?<br><br>Test Plan:<br>See description.   |    |
| Provide the ability for a user to set criteria so that e-mail delivered to a mailbox triggers an alert to their mobile device.  | Requirements:<br>See description.<br><input type="checkbox"/> Review required?<br><br>Design:<br>See description.<br><input type="checkbox"/> Review required?<br><br>Test Plan:<br>See description.                       | Li |
| This feature includes changes to the provisioning flow and text to increase user success. It also may include an import control that can access Outlook in Corporate mode.  | Requirements:<br><a href="#">[documents]</a><br><input type="checkbox"/> Review required?<br><br>Design:<br>See description.<br><input type="checkbox"/> Review required?<br><br>Test Plan:<br>See description.            | Li |
| <ul style="list-style-type: none"> <li>This is closely related to the WAP push FPL item and should be assigned to the same developer(s).</li> <li>Leading candidates to replace SMTP are               <ul style="list-style-type: none"> <li>SMPP 3.4</li> <li>PAP(Push Access Protocol)</li> </ul> </li> </ul>  | Requirements:<br><a href="#">[documents]</a><br><input type="checkbox"/> Review required?<br><br>Design:<br><a href="#">[documents]</a><br><input type="checkbox"/> Review required?<br><br>Test Plan:<br>See description. | Li |
| Objectives include: <ul style="list-style-type: none"> <li>Reduce our bandwidth usage, and thus our Exodus bill.</li> <li>Reduce workload on POP mail providers</li> <li>Reduce workload on OWA 5.5 mail providers</li> <li>Reduce workload on OWA 2K and iNotes mail providers               <ul style="list-style-type: none"> <li>One option is to make the majority of polls "new mail only" polls. These polls would not check for deleted messages, only "new mail".</li> </ul> </li> </ul> | Requirements:<br><a href="#">[documents]</a><br><input type="checkbox"/> Review required?<br><br>Design:<br>See description.<br><input type="checkbox"/> Review required?<br><br>Test Plan:<br>See description.            | Li |

11497\_QuickPoll\_FPL21.JPG

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